DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own. — JOHNSON.

VOL. II. SATURDAY, MARCH 16, 1850. NO. 6.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

NEW ENGLAND SOCIETY FOR THE IMPROVEMENT OF DOMESTIC FOWLS.

FEB. 28, the agricultural meeting was held at the State House, Mr. Calhoun, the president, in the chair. The subject was the formation of a poultry association. A few remarks were made in regard to the important subject of domestic fowls, and the advantages that would result from an association for the purposes of improvement in this branch of rural economy. Parts of the report of the committee of supervision of the late Fowl Breeders' Convention were read, having a tendency to encourage the object of the meeting.

A committee was appointed to prepare and report a constitution for the consideration of the meeting. In due time they reported a constitution, which was accepted. A committee was then appointed to nominate officers, who reported the following list: —

President. — Samuel Jaques, Ten Hills Farm.

Vice-Presidents. — Massachusetts: Paoli Lothrop, South Hadley; J. C. Bennett, Plymouth. Rhode Island: John Giles, Providence; W. S. King, Woodland Farm. Maine: Russell Eaton, Augusta; Rufus McIntire, Parsonsfield. New Hampshire: Col. Stevens, Concord; H. C. Parker, Manchester. Vermont: Frederick Holbrook, Brattleboro'; N. T. Sheaf, Westminster. Connecticut: C. H. Pendleton, Pendleton Hill; Ethan Allen, Pomfret.

Treasurer. — George E. White, Boston.

Recording Secretary. — John C. Moore, do.

Corresponding Secretary. — Henry L. Devereux, do.

Trustees. — Timothy House, W. J. Buckminster, Eben Wight, Boston; E. S. Kelley, Newburyport; B. W. Balch, Dedham; Alfred A. Andrews, Roxbury; John Brooks, Princeton; John Merrill, Wm. Stickney, Cambridge.

The report was accepted, and the gentlemen nominated declared elected.

The above list indicates the character of the constitution in regard to officers. The constitution provides that all the above officers constitute a board of trustees for the general management of the affairs of the society. Any person may become a member *for life*, by paying two dollars. Two exhibitions are to be held annually, one in the summer, and the other late in autumn.

During the time the committees were out, several gentlemen made interesting remarks on the subject before the meeting. Col. Jaques, Col. Thayer, of Braintree, and Mr. Giles, of Rhode Island, took a conspicuous part in the discussion. Gov. Briggs and other distinguished gentlemen were present, and the hall was well filled. After the permanent organization of the society, a large number crowded around the table, and put their names on the list of members, which was headed by the governor of the commonwealth.

Thus has this association for one of the most useful purposes commenced its existence under the most favorable auspices, and we trust, that with the judicious management of the officers, and a favorable response from the people, it will flourish, and spread its genial influence, not only over New England, but over the whole country.

REV. MORRILL ALLEN.

This gentleman has long been distinguished as an excellent practical farmer, for he was among the most prominent pioneers in improvement, and the valuable instructions from his pen have been sown broadcast over the country, often falling on a congenial soil, and producing an abundant harvest. Our friend has been so efficient in this cause, that he is justly styled the "Model Farmer," the "Veteran Farmer of Pembroke," &c. He has earned an enviable reputation, that will endure, while the fame of the aspiring demagogue, who owes his notoriety to transient causes, will be buried in rubbish by the whirlwind of party strife.

We are happy in paying this tribute to genuine worth, and recording it in a work, which from its permanent form, and adaption to the library, will, we trust, survive for ages. Mr. Allen gives the worthy example of accumulating a handsome property by farming, for he received only a few hundred dollars a year for his clerical services. We regret that he finds it necessary to decline acting any

longer in an official capacity in the agricultural society of his county, as appears from the following resolve of the trustees:—

Whereas the Hon. MORRILL ALLEN, of Pembroke, who, for thirty years last past, has emphatically identified himself with the agricultural interests of Plymouth county, and by his science and practical skill in farming, has won the distinguished appellation of the "Model Farmer," has communicated his determination, by reason of his advanced age, to retire from further official service in the Plymouth County Agricultural Society,—

Therefore, Resolved, That this Board respectfully tender to Mr. ALLEN an acknowledgment of the obligations of this society to him for devoting so much of his time and talents to its objects, and for the eminent success and ability with which he has for many years filled the offices of its President and Supervisor.

Attest, JESSE PERKINS, *Sec.*

LECTURES ON THE VETERINARY ART.

February 28, and March 7, Dr. Brooks delivered lectures before the agricultural meetings, giving a history of the absurd practices in past ages, and the progress in veterinary science in modern times, in Europe. At the beginning of the former meeting, Dr. Warren, one of the trustees of the Massachusetts Agricultural Society, remarked that while Dr. Brooks was a student in Europe, the board of trustees of said society requested him to continue some years longer, for the purpose of attending the veterinary school at Altfort, near Paris, and studying the anatomy and physiology of the horse, and the mode of treating diseases, for the purpose of giving instruction in these branches on his return to this country.

Dr. Brooks's lectures were wholly historical in relation to this important art or science. He showed particularly the thorough studies and practice required at the school we have named, before a student could receive his diploma. The time of attendance is four years, and those who do not make good progress are put back, in order to become thorough before leaving the institution; so that some have to study five, six, or eight years. Such were the regulations, that a more thorough knowledge of the veterinary science was required of graduates than was required of the students of medicine. He spoke of the French schools of this character being far superior to the English, both in thoroughness and in the time required to graduate.

Dr. Brooks contemplates delivering a course of lectures on the diseases of the horse, another season. His historical account of the veterinary surgery showed research and close investigation; but the audience were generally disappointed, as they expected something of practical utility — some account of the anatomy and physiology of the horse, and the mode of treating diseases. We regret that Dr. B. did not condense his two historical lectures into a small space, and give the information so much desired and needed, and earnestly expected by those who felt the want of that information, which he had gained by embracing the superior advantages afforded him in the veterinary colleges of Europe.

EGGS IN WINTER.

We have often recommended special attention to fowls in winter, in order that hens might lay at a season when eggs are scarce and dear; and we have no doubt that the great interest taken in poultry, on account of the recent excitement on the subject, consequent on the splendid exhibition of fowls last fall, has led to unusual care in the winter management of fowls. The article which we gave our readers on this subject, in our first number, has been copied into almost every paper that we have seen; and we often hear of the favorable effects of extra attention to this interesting branch of rural economy.

This attention, we have no doubt, is one of the principal causes of the large number of eggs in our market this season. A few weeks ago, a dealer in this city bought eggs at fourteen cents per dozen — only half what he paid for them just one year previous.

In the article in our first number, to which we have alluded, we stated that one hundred and fifty hens produced nineteen hundred eggs in the month of January, even in the northern part of New England; and that from a lot of hens, we had eggs enough in January to pay three times the cost of keeping them. We were lately informed by an amateur in this business, that from eighteen hens, he had seventeen dozen of eggs in the short month of February. Another remarked that he had seventeen dozen from twelve fowls, in the same month. In the Ohio Cultivator, a correspondent states that twenty-six hens, in two and a half months, beginning the first of December, produced forty dozen of eggs, besides enough for a liberal use in the family. These, with hundreds of other favorable cases, should lead to that attention which will produce a good supply of eggs in the winter season, instead of their being almost as scarce as lumps of California gold. Let every one consider that every animal that is worth keeping, is worthy of care and good management.

PRODUCE OF A SOUTHBOROUGH DAIRY.

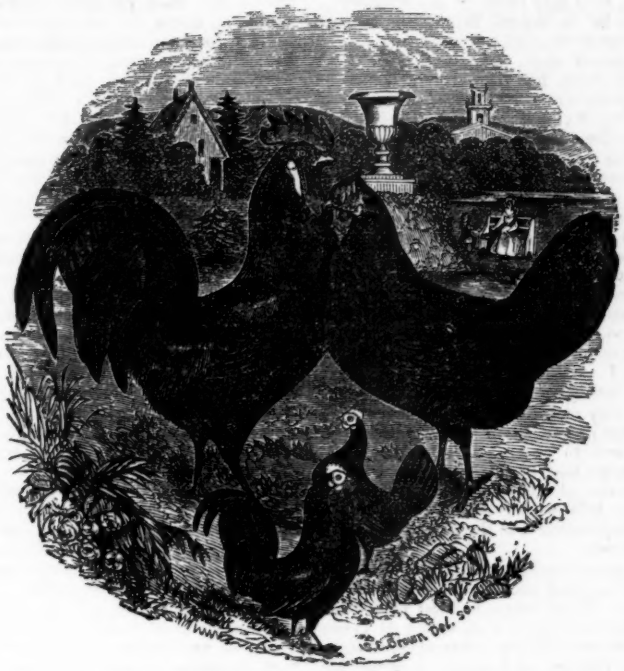
MR. EDITOR: I send you the produce of twelve cows the present season, (with the addition of one farrow cow and one new milch cow, the months of April and May.) Butter sold from the 1st of March to the 1st of December, 2287 lbs.

Cash received for the same,	$524 79
Butter consumed in the family, 126 lbs., at the same price of that sold,	29 94
To milk sold from the same the present season,	77 76
Calves sold from the same,	70 71
	$703 20

GEO. W. GOODNOW.

SOUTHBOROUGH, *Jan.* 1, 1850.

Mr. Goodnow has had a very fine yield from his cows. We have no better pasture land hereabouts than is found in Southborough. It will be seen that Mr. G.'s cows yielded considerably more than fifty dollars each. — *Mass. Ploughman.*



BLACK SPANISH FOWLS.

For the New England Farmer.

Mr. Cole: The fowls from which the engraving was delineated, belong to Francis Blake, Esq., of Newton Lower Falls, Mass. These fowls are, in the opinion of the writer, the only thorough-bred pair in this section of the country, and were exhibited on the 16th day of November, 1849, at the Public Garden, in Boston. In the foreground of the engraving is introduced a pair of Black Bantams belonging to Mr. Blake, for the purpose of showing the comparative size of these two distinct breeds of fowls, and how nearly in form and plumage they resemble each other: the wattles, combs, and cheek pieces in both varieties are alike in color and form, the only difference being in the comb of the Spanish hen, which is drooping; the comb of the Bantam hen stands erect.

The Spanish breed of fowls is highly prized in England for its size, and the beauty of its form and plumage. The color is a most brilliant jet black, the legs and bill corresponding with the color of the plumage; and the eggs produced by this breed command a greater price in the markets of London, than those produced by any other breed.

The hens of this breed are great layers, producing large and white eggs of great weight and of superior flavor, and rarely show the least disposition to sit, and when they do sit, are represented as negligent nurses. The chicks are hardy and easily raised, of a shining black color except the breast, which is white, as is a ring around the eyes and bill, with some white spots under the chin; but as they do not become fully feathered until nearly full grown, they should be hatched early in the spring.

The following letter the writer received from Mr. Blake, the owner of the two breeds of fowls shown in the engraving. S. B. MORSE, JR.

S. B. Morse, Jr. Esq. Sir: In the drawing recently taken of my imported Spanish fowls and Black Bantams, the artist has grouped them together, for the purpose of showing their comparative sizes. Their jet black plumage, at present in fine order, has a very beautiful purple and greenish metallic lustre. They are of fine form, with immensely large combs, and wattles of brilliant scarlet, beautifully contrasted with very large white *cheek pieces*, or *ear lobes*, delicately shaded with purple; the comb of the hen drooping, while that of the cock is erect, rendering his appearance quite dignified and regal. They are considerably above the medium size, but not remarkably large. In this drawing you will notice the showy serrated comb, drawn from a cock reared by me during the last season, the comb of my imported cock having suffered from the effects of the voyage and cold.

As layers, I believe all writers are agreed, that their character is unsurpassed, whether the number, size, or richness of their eggs is considered.

"As table birds," says Richardson, "they hold a place in the very first rank, their flesh being particularly white, tender, and juicy, and the skin possessing that beautifully clear white hue, so essential a requisite for birds designed for the consumption of the gormand." "They are, besides, prolific, extremely easily fed, and in short, I know of no fowl I would rather recommend to the notice of the breeder."

During the three years I have had this breed, the hen has manifested no inclination to sit, laying almost constantly. In breeding, it will be necessary to employ some other variety as mothers, for which purpose I would recommend the Dorking.

The little Black Bantams, sometimes styled the African Bantam, but which I designate as the Dwarf Spanish, are almost perfect miniature counterparts of the Spanish, and may, I think, be regarded as the fowl fancier's "*beau ideal*," so far, at least, as beauty is concerned; and if the accounts of the superior

delicacy of their flesh, and their laying qualities, are to be relied upon, they may prove of much utility.

Cobbett's remarks in regard to pigeons may, I think, be appropriately applied to these birds.

It is not supposed that there could be much *profit* attached to them, but they are of this use: they are very pretty creatures, very interesting in their manners; they are an object to delight *children*, and to give them the *early habit* of fondness for animals, and of *setting a value* on them, which, as I have often had to observe before, is a very great thing. A considerable part of all the property of a nation consists of animals; and if you consult your experience, you will find that a laborer is, generally speaking, of value in proportion as he is worthy of being intrusted with the care of animals; and nothing is so likely to give him that excellent habit as his seeing, from his very birth, animals taken great care of, and treated with great kindness by his parents, and now and then having a little thing to "*call his own.*"

This breed, as I am informed, has very recently been introduced into this country from Antwerp, where it is still very rare, and highly esteemed. I understand that the person having the original stock has taken measures to obtain their history from abroad, which I hope may be introduced in a future edition of your work. A gentleman of much experience (Dr. Wight) informs me that the eggs of this breed are larger in proportion to the size of the fowl, than any other known.

This is an important consideration, and if I am not digressing too much, allow me to say a word or two in this connection. There seems to exist at present a *mania* for fowls of the largest size, which in many instances are sought for with sole reference to weight, without regard to expense of keeping, qualities for the table, for laying, or breeding. I would suggest that contributors to future exhibitions furnish *faithful* accounts of their mode and expense of feeding, weight of their fowls, number and weight of eggs laid during the *year*, summer and *winter*, and the general result of their experience in breeding. Such data, while it would remove all doubts from the minds of the most sceptical, as to the profit of this description of stock, would enable us to decide with accuracy, as to the comparative merits of the different breeds.

I predict that such a comparison would lead to a preference for fowls of medium size, maturing at an early age, laying the largest number and weight of eggs, with flesh of fine quality, and feeding at the smallest expense, in place of the uncouth, gaunt, raw-boned, long-legged breeds, with coarse, flabby, dark-colored flesh, enormous eaters, and miserable layers, at present so popular with some of our *fanciers*. I am, very respectfully,

Your obedient servant,

FRANCIS BLAKE.

P. S. Since writing the above, I have very carefully weighed the eggs of the Bantam, which I find to be twelve and two fifths ounces per dozen, the fowls weighing two pounds ten ounces; while the eggs from a pair of the China breed, weighing fifteen pounds and three quarters, weighed but twenty-five ounces. I regret that I cannot at present communicate the result of an experiment, showing accurately the expense of feeding the two breeds.

For the New England Farmer.

DEEP AND SHALLOW DRAINING.

Mr. Cole: I left off in my last with a promise to specify the various appliances used in draining, so far as my knowledge of such extends, and now proceed to the performance of that duty in such manner as I may.

I have heretofore spoken of *bush* draining. It is one of the most primitive systems, and, as I described it, one which has permanency of effect, so far as the instance quoted demonstrated. The use of *stones*, small in size, or broken to the stipulated weight of from three to four pounds, commenced with the introduction of the general system of thorough drainage. These were put into the trench to a height of from eight to ten inches from the bottom, over which straw was placed in order to prevent the mould from *sifting* through the stones and choking the drains. Many thousands of miles have been laid in this fashion in Scotland and the north of Ireland, and in every instance success has followed the system. Farmers in these countries were in the habit of gathering the stones from their soil for the purpose of thus using them; but it was demonstrated by scientific men that their removal was prejudicial, through the detachment of one of the natural organic conditions the healthy growth of crops demanded. In those instances where the stones were thus removed from the land, the geological structure of the locality forbade the supply from any other source — thus setting the inventive skill of agriculturists to work to find a proper substitute.

In Scotland a large proportion of the arable soil is of alluvial origin, or won by cultivation from the heaths — the "moors and mosses mony," with which that country and Ireland abound. Peat is plenty in both countries; and I think it was the Laird of Cleland (an estate in the eastern part of Lanarkshire, Scotland) whose inventive skill was first directed to the use of *dried peat* (or turf) in place of stones. Vast quantities of it are cut every year for fuel; and it is well known that, when dried, it possesses the most enduring properties against every element except fire. He condescended upon a shape which every mechanic versant with the science of his trade, will admit to be most scientifically considered. A sectional description is given below. He next had a spade made, the blade of which cut one of the longitudinal sides of the section, while a cutter, crossing the face of the blade, moulded the opposite side and both edges of the turf. This cutter was about an inch and a half in breadth, and, as well as the edge of the spade, made sharp. It was twelve inches long, with a plate proceeding horizontally from the *tramp*, (or the place where the foot is put when the spade is used,) which stopped the insertion of the spade into the peat bank when full. The following cuts will show the end or section of one of these turfs, and the combination of two to make the water-course of the drain: —

Fig. 1.

Fig. 2.

The above cuts are in exact proportion of one quarter of an inch to an inch, and the sectional shape of the spade will agree with an extension of *Fig.* 1, according to this rule.

When the two turfs are placed in juxtaposition in the bottom of the drain or trench, the perpendicular sides (the outsides on the under parts) should touch the respective sides of the drain — at least, they demand no more room than is required for their insertion into the bottom of the trench. It will be observed by applying a straight edge to the perpendicular side, and along the side of the drain, upwards, that there is an inverted, wedge-shaped space left between each turf and its corresponding side of the drain. This is necessary in two different and equally important respects: First, because it favors the uniform shape of the turfs, which, turn them as you

may, upside down, and *vice versa*, are still found in proper articulation; and secondly, this shape furnishes the *key* to the strengthening, on the most undeniably mechanical principle, of the fabric. Some supply wedges to suit these spaces, but this is not necessary; a sprinkling of loose earth, sufficient to fill up the triangular gaps which appear in the section, is enough for all purposes. In proof of this, I may state to you that I have walked along the top of as many as twenty rods of peat drain, put in as quickly as the turfs could be dug from the mass, without any drying or preparation whatever, and I did not break through, or effect more than a consolidation of the upper halves of the opposite turfs; and as you well know, I am no chicken in point of weight.

A moderate day's work of a man and boy will produce from five hundred to six hundred feet of such turfs. I mean from one thousand to twelve hundred single cuts, twelve inches in length, per day; I have known a man and boy produce twenty-seven hundred. Tiles in this country, I conceive, would cost somewhere about two dollars per hundred, in a well-supplied market, and more where scarce. The advantage of the above adaptation to farmers, will then be specially obvious, as many in New England have *plenty* of peat swamp to operate upon, and *more* land which demands draining operations. The permanency of peat is well known. Cultivators of such land need not be told of the tenacity of this vegetable mould to its original composition. I have seen peat drains of sixty years' standing, which retained excellent operative qualities, but the instance was isolated, and purely incidental; still it was sufficient to test the lasting quality of peat as a medium for draining.

I find that I have presumed upon too much of your valuable space already, and by your kind permission, will take advantage of the next consecutive number, and its successors, to follow out this subject. I really hope I may interest and profit, for no other motive lies at the base of the wish of

A FIRESIDE FARMER.

Boston, *Feb.* 19, 1850.

For the New England Farmer.

BONE DISORDERS IN COWS.

Mr. Editor: Your correspondent Wm. R. Putnam, of Danvers, in his communications on this subject, in the N. E. Farmer of Nov. 24th and Feb. 2d, adduces some facts in support of the theory that this disorder in milch cows is owing to the want of a sufficient supply of the phosphate of lime in their food, which, as it seems to me, do not justify his conclusions. For example, in endeavoring to assign a reason why this disorder has not manifested itself in Hamilton, he says, "The farmers in that town are in the habit of using a considerable quantity of hay from the salt marshes of Ipswich and Essex. It is the practice of many there to keep a portion of their best salt hay till the time the cows go to pasture; they will often eat it then, when they will not eat the best of English hay." This is all true — and equally true is it that salt hay is then fed out to our working cattle, and that they will eat it with better relish than the best of English hay. Not that salt hay is the sole feed for either cows or oxen at this season, but as a change of food. Now, if your correspondent arrives at the conclusion, from these facts, that salt hay supplies the waste of bones in our cows, I ask if it also furnishes the bone material to our oxen, when he states, too, that oxen are never affected with this disorder?

But I would inquire, what reason is there to believe that salt hay contains more of phosphate of lime than other hay? The only evidence brought forward by your correspondent, is in the shape of an inference: "From the large quantity of lime in the shells of clams and muscles found about these marshes, the *inference* is, that it contains a large amount of phosphate of lime." With him I can say that I have never seen an analysis of this kind of grass; but in Hitchcock's Geology of Massachusetts, page one hundred and six, is an analysis of marsh mud, by which it appears that the amount of phosphate of lime contained in specimens from three localities, viz., Newburyport, Cambridge, and Medford, is less than one per cent. The inference then would seem to be, that the amount of this ingredient in salt hay must be very small — so trifling as hardly to keep the bones of our milch cows from going the same way as the bones of those in Danvers, providing that this disorder is really owing to the want of a sufficient quantity of this same ingredient in the food of milch cows.

I have always supposed that cattle are fond of an occasional foddering of salt hay, for the same reason that they are fond of licking salt; and I believe it to be true that cattle of all kinds, oxen as well as cows, farrow cows and heifers as well as milch cows, are equally fond of it.

Another fact stated by your correspondent is, that milch cows are liable to this disease "even while they were well fed upon good English hay and Indian meal." And again he asks, "Why is it that oxen and dry cows do well, while milch cows fed from the same haymow and meal barrel, become poor and stiff, if it is not because they do not get phosphate of lime enough to make milk and support the bones?" If your correspondent will consult any analysis of Indian corn, he will find that the third largest ingredient contained in it, is this same bone-making phosphate of lime, being indeed more than seventeen per cent. of Indian corn. How he will reconcile this fact with his theory, I am at a loss to conjecture.

Again, he says, "Those farmers in Danvers whose cows have been affected by this disorder, have not been in the habit of raising stock, but have sold their calves to the butcher;" and he then goes on to show the probable amount of animal matter (meaning, as you, Mr. Editor, say he means, phosphate of lime) that has been taken in this way from the soil. Now, it is a fact, I believe, that few, very few farmers raise many calves in Essex county — nine tenths of the calves in this part of the county are sold to the butcher. If this exhausts the soil of phosphate of lime in our part of the county, why should it not exhaust it in another?

There are many more pertinent questions that might be asked in reference to this subject. But it is much easier to ask questions on a subject like this, than to answer them. I am free to confess that I feel the want of a better acquaintance with the whole subject — the diseases of animals and the analyses of various substances, and with other matters out of the range of ordinary experience and observation — a want, indeed, of just that kind of knowledge which an agricultural school would impart. This disorder in milch cows, whatever it may be, is one of those subjects which scientific men can best investigate and treat of — showing the cause and the remedy, and the reason of the remedy. All the facts in the case are important; but the inferences drawn from them must be legitimately drawn, to command assent. I am as yet unable to see that the (so called) bone disorder in milch cows is at all attributable to the want of enough phosphate of lime in their food — or, indeed, that their bones are any more affected than other parts of their system, when suffering under this disease.

ALLEN W. DODGE.

Hamilton, *Feb.* 23, 1850.

For the New England Farmer.

NOTES OF THE SEASON.

Winter set in with just a sufficient fall of snow for good sleighing, about the first of December. The storm came off mild, and the snow remained quiet as it fell, so that it furnished fine opportunities for travelling, hauling wood, or, indeed, any business in which the farmer wished to engage. With small additions of snow, the sleighing continued fine until near the middle of the month, when in many places it was spoiled by the thaw, while in others, from the ice formed when the storm came off, it remained passable. On the afternoon of the 22d, a violent storm of snow came on from the south-east, from which the wind soon changed to north-east, and blew a tempest for three or four hours. This storm, as north-easters usually do, came off mild; but on the afternoon of the 24th it grew colder, and the 25th was a rough, cold, boisterous day. The morning of the 26th was the coldest of the season thus far; the mercury sunk 10° below 0.

January came in very mild, but not warm enough to waste the snow. Unusual mildness has characterized the month. The whole depth of snow which has fallen during the month is thirty-three and one quarter inches; greatest fall at one time, nine inches, January 18; — the gross amount of rain, ten and one quarter inches; — greatest fall on the afternoon of the 11th, three and one half inches. Rain and hail fell to the depth of two inches the 21st. The number of days on which storms fell during the day and night was sixteen. There were seven days of entire cloudiness, when neither sun, moon, nor stars were seen, during the month. There have been but few days on which it has not thawed some, and very frequently the snow has softened through. The coldest day was the 29th, and the coldest morning the 30th. The ground has been unfrozen in the woods through the month, and timber has been perceptibly frozen only once or twice, and that only for a short time. The singing of Phebe birds was heard on the 4th and 18th of the month, as blithe and gay as though spring had really given them welcome.

The winter, with so much fine sleighing, and so much mildness, has of course thus far been a fine one for business or pleasure. Farmers have improved it well, as fine wood-piles and other visible facts will fully testify. If it should continue so fine until the spring opens, it will have no claim to the character of a dead, unprofitable one, as our New England winters are so often called: we hope it will prove an agreeable exception to all such.

Yours truly,

Feb. 1, 1850. W. BACON.

For the New England Farmer.

MAKING SUGAR.

Mr. Editor: As the time for making maple sugar is approaching, a few remarks on the subject may not be wholly uninteresting, even though some of them may not be altogether new.

In this, as in every thing else, the profits depend very much upon the manner in which the work is done. Some fifty years since, all that was required in this part of the country was, a few troughs made by digging out one half of a poplar log, two or three feet long, and three or four iron kettles, which were suspended between two logs, in the open air. A chip was cut from the tree with an axe, sloping in such a manner that the sap would run to one corner of the cavity, and a spout was inserted with a gouge. At the close of the sugar season the troughs were inverted, and allowed to remain through the summer. Under such circumstances we shall be almost ready to admit the remark of an old gentleman not particular for neatness, that the sap from his trees was so sweet that he could not see to the bottom of it; and after adding the coals and ashes which would fall into it in boiling over an open fire, we shall readily perceive that the color of the sugar must have been decidedly rich.

Now, although there may not be any one at the present time who is as slovenly as this, yet there are some who do but little better, making sugar as near to the color of tar as to sugar made as it should be, and but little better in taste.

I do not pretend to any particular skill in this business, but for the benefit of those who know still less, I will endeavor to give a few plain directions, by which maple sugar may be made equal to the best brown sugar made from cane.

In the first place, suitable vessels should be provided to catch the sap; and for this purpose I prefer pine tubs, made smallest at the top, because they are less liable to leak than those made of other timber, and they will catch less water, in rainy weather, by tapering upwards. They should not be painted on the inside, as the paint is liable to come off, and give an unpleasant taste to the sap. Hemlock and spruce tubs are apt to leak, and butternut will give a dark color.

Spouts may be made of common sumac with the least labor, but perhaps pine ones would be neater. The trees should be bored with a five eighths bit, and the tubs suspended by a cord or small wire from the spouts, or hooks, made for the purpose. When the trees are so scattered that it is necessary to use a team to gather it, a tub may be made of any required size, with a square hole cut in the upper head large enough to admit a pail, and a lid fitted closely to this space.

The tub should taper towards the top in order to retain its hoops, and stand firm on the sled. The sooner the sap is gathered and evaporated the better. For this purpose "sap pans," as they are called, are much the most economical.

They are made of sheet iron, which should be of the best quality, from five to seven feet in length, from two to three in width, and from six to nine inches in depth, and stiffened by a large wire around the top, with two handles on each side, for convenience in handling. This should be placed on cast-iron bars, over a fireplace built of brick, the inside of which should be about half an inch on each side smaller than the bottom of the pan. About one third of this, next to the chimney, should be bricked up to within eight or ten inches of the bottom of the pan, as this will save fuel. A space the size of a brick should be left on each side, at the bottom, and about the middle of the fireplace, which will prevent it from filling up with coals, and may be stopped up at any time with a couple of bricks. With a pan five feet by two on the bottom, and three inches larger each way on the top, six barrels may be evaporated in a day, by filling it at night, and leaving a good fire under it. Care should be taken, however, not to leave too much fire, unless the pan is deep, as it sometimes "burns down."

The pan should rest on the bars at all points, as otherwise they will be exposed to be bent by the heat. Good dry wood is absolutely necessary, and soft wood, such as hemlock or pine, is best, as it makes less coals, and burns clearer. The sap should be boiled to a sirup as thick as will run through a woolen strainer after it is cold; it should then be strained, and allowed to stand over night to settle, after which it should be drawn off carefully as long as it runs clear. The white of eggs and saleratus, the quantity proportioned to the impurities contained in the sirup, should be mixed with it while cold, and it should be heated slowly until it begins to boil,

when it should be carefully skimmed, or, if it is wished to have it very pure, strained through a woolen strainer, and then placed over the fire and the boiling finished. It is usually boiled until it becomes quite hard, by stirring until it is cold; but the nicest sugar is made by evaporating until it will grain, and then, after letting it stand several weeks, draining off the molasses.

For the purpose of "sugaring off," as it is called, a sheet-iron pan is as much superior to any thing else, as for boiling the sap; but it should be made smaller, say three and one half feet long by two in width, and nine inches in depth, and put together in the best manner.

I almost forgot to allude to the article in No. 3 of the second volume of the Farmer, in which a correspondent of the Ohio Cultivator recommends pans with plank sides. Such pans were "all the rage" here a few years since, but those who made them, after using them a year or two, threw them aside, and obtained those made wholly of sheet iron.

W. F. B.

Ashfield, *March* 4, 1850.

For the New England Farmer.

AGRICULTURAL EDUCATION.

My dear Sir: For some days have I been anxiously waiting the action of the legislature in relation to the contemplated modes of promoting instruction in agriculture. I hope no local or sectional prejudices are to be brought in to waiver the minds of any in relation to it. I care not *where* the experiment is to be commenced, if it can be done under auspices most favorable. Let it once be fairly started, and some Lyman will appear to help it onward. If not, the state itself is abundantly able, and the yeomanry of the state should not be otherwise than willing.

I have been hoping to witness a more distinct expression of opinion from the hard hands themselves than I have yet seen. In the reports of the discussions at your agricultural meetings, it appears that the remarks are usually made by those who are more distinguished for speaking than for working. We want something from both. I care not how rough are the blocks, when first taken from the quarry; three chances to four, the roughest exterior covers the smoothest internal substance. Gems of purest water are often found surrounded with the most forbidding accompaniments.

Is it not true that one half or more, of those who occupy the seats in the halls of legislation, are ranked under the denomination of farmers? But have one half of these yet favored the public with their opinion? Ask any of these gentlemen, at their own fireside, and they will be ready to give you a reason—and oftentimes very sound ones too—for the faith that is in them. Why should they not be equally ready to give their reasons at the meetings mentioned? It cannot be that they are ashamed of their reasons; but it is that they are afraid they shall not express them with so much ease and propriety of phraseology as some of their more favored associates.

Whoever hesitates to give utterance to what he thinks, for this cause, fails in the duty he owes to himself and to the public. Of what use is a man's knowledge, if he will not let it be known? I would not be the advocate of much speaking, nor would I have any one presume to speak before he is prepared with something to say. But what I wish is, that each one would think for himself, and frankly and freely communicate what he thinks. In this way many valuable suggestions will be elicited, that can readily be moulded into form for use.

In some instances I have noticed, where gentlemen have turned their eyes from their lesson, and hazarded a remark that did not chime with all our notions, some have been disposed to sneer at their eccentricities. I doubt exceedingly the policy or propriety of any such movement. If a man makes his suggestions honestly, let him be commended, and aided in so doing. No true gentleman will ever presume to do otherwise. I fear that I have already prated too long, and perhaps some will think I have only been preparing an apology for my own condition. Truly yours.

Feb. 28, 1850.

For the New England Farmer.

PROFITS OF ORCHARDING IN MAINE.

Friend Cole: It may not be altogether uninteresting to the readers of the Farmer to learn something about the profits of this part of husbandry in Maine, in which, as a whole, such inattention has until recently been manifest. Notwithstanding the great majority of farmers in this state, who have paid any attention to the cultivation of fruit, have taken so little care of their orchards, as to receive but little, if any, profit, it is not the case with all. A neighbor of mine, who has a young orchard of about one acre, that has been well taken care of, informed me that he should realize about two hundred dollars for his crop of apples raised the past season. His trees have not yet come to maturity; consequently a greater amount of income may be looked for; yet it is difficult to conceive what other branch of husbandry, in this vicinity, could be made equally profitable, with so small an expenditure.

Another farmer in this county has a young orchard of about two hundred trees, of choice fruit, who, as I was informed, offered to sell his farm, valued at three thousand dollars, for what apples would grow upon it for fifteen years, to be transported from twelve to twenty-five miles, and the orchard kept in a flourishing condition.

Much more interest is now apparent among farmers in Maine than formerly, in the cultivation of fruit as a source of profit; and with many, less fears are entertained of the business being over-done.

D. TABOR.

Vassalboro', 2*d Mo.*, 1850.

For the New England Farmer.

"NATIVE TREES, SHRUBS, AND PLANTS."

Mr. Cole: I have been very much pleased, of late, to see the communications in the Farmer from Mr. Fowler, of Danvers, on the above-named subject. I think our native trees and shrubs have been neglected quite too long. I made up my mind last year that I would cultivate every native flowering tree or shrub that I could find; and having been employed some time in collecting them for nurserymen, I know where to find many of them; but there are some that I do not know where to find. Now, my object in writing at this time is, that, if there are others engaged in making such collections, that we can correspond with, and assist each other, by exchange or otherwise. Perhaps this may appear to some too much like an advertisement; if so, I hope they will take the benefit of it. I shall be glad to buy those I want, or sell those I may have to spare, or can procure. You may say to your correspondent N., of Danvers, that the hemlock here thrives well on poor, gravelly soils, and bears the shears as well as the buckthorn or arbor vitæ.

B. F. CUTTER.

Pelham, N. H., *Feb.* 25, 1850.

FACTS IN POTATO RAISING.

This being the season for planting potatoes throughout the Northern States, and the agricultural community, no doubt, thinking much of the rot, and the probabilities of its affecting the crop about being planted, I have thought best to record an interesting fact in regard to that apparently incurable disease.

In the spring of 1847, I turned under a sod on clay ground, and planted it with merino potatoes early in May. They grew well and yielded a heavy crop for the season. About the first of October I commenced digging, intending to bury them mostly in pits, on the field where they grew. I dug about fifty bushels, and buried them lightly in a round, shallow hole, when we were hindered from digging more at that time by a very heavy rain storm, and the ground was completely saturated by water. Those dug at this time presented no appearance of rot in any way, and I congratulated myself on having a sound crop of potatoes *once more*. After about two weeks had elapsed, and the ground became fit to work, I began digging again; but lo, the rot had appeared! Small white specks covered the skin of very many of the potatoes, and some few were already rotten. I knew they were *not to be saved*, and put them in small pits of twenty or thirty bushels each, intending to handle them over, sort them, and feed them up to the hogs and cattle as fast as possible. They rotted so fast that I lost over one fourth of the crop in two or three weeks, before I could feed them to my animals; and had they been left in the pit, I believe they would have all rotted before winter came; yet they had only a covering of rye straw, and about two inches of dirt. After I had disposed of these last small pits, I turned to examine the larger one dug and buried before the rain. I opened it about the middle of November, six weeks after it had been made, and to my surprise found but very few rotten. I handled them over, and buried them again, depending on them for seed the following year. They came out in the spring fine, and were very good for eating, being all that were left of about eight hundred bushels that grew on the same field of four acres.

Last fall, I dug early, and secured my crop before they were exposed to the heavy fall rains, and have lost very few by rot, scarcely any; and I conclude that early planting and early gathering are the best guards against the potato disease.

I have been confirmed in this opinion of late, by seeing a paragraph going the rounds in the newspapers, relating the success of the same management in some particular case; and I thought it worth while to give the above to the readers of the Dollar Newspaper. I have been sorely perplexed by this potato rot, and have never been able to find any other preventive than the simple one above mentioned. I shall try it again. B. L.

— *Dollar Newspaper.*

UNDERDRAINING MEADOWS WITH THE SUBSOIL PLOUGH.

Some of our best farmers have lately adopted, with entire success, the system of underdraining their heavy clay and wet meadows. This is done in the most summary manner, by attaching two yoke of good oxen, or two pair of horses, to a strong subsoil plough, which penetrates to the depth of fifteen to twenty inches below the surface. The sod is divided and separated by the plough to a distance scarcely exceeding one and a half inches, which immediately closes after the furrow; and if moist, when the operation is performed, the turf speedily unites, and not even a line is visible beyond a few days.

By this operation, a large underdrain is left at the bottom of the furrow, where the point, or nose, and wing of the subsoil plough has passed, and nearly of their size, which, in stiff soils, will remain open for years. On meadows where there are puddles of standing water, as is always the case on stiff soils after rains, the effect is instantaneous. If the plough has been started in a ravine, or low part of the meadow, (as it should be, so as to form a descent for the surface water,) when it passes through the little basins, the water vanishes as if by magic, and it is heard gurgling rapidly along its new-found aqueduct till it reaches the outlet. In addition to this more immediately perceptible effect, if the meadow thus drained be closely watched for a few weeks, and especially during wet weather, a marked improvement will be noticed over similar undrained meadows. The grass will be thicker, ranker, and more forward; it will mature quicker, and yield a heavier growth of sounder and sweeter forage.

The distance of these furrows, or drains, should vary according to the compactness or tenacity of the soil, and the frequency of the basins to be drained. In the heaviest soils, the drains may be advantageously run within ten feet of each other. If less adhesive, and few pond holes exist, the furrows may be a distance of twenty or thirty feet. No meadows, unless of the lightest kinds, will be injured by this operation, while all others will be decidedly benefited. This results from the imperceptible yet rapid drainage of the water which is held in excess by the soil, and the escape of which is so beneficial to the vegetation.

This operation has been adopted in England many years since, but with an implement considerably differing from the subsoil plough. It consisted simply of a pointed iron, some three inches in diameter at its largest end, which was connected with the beam by two strong, thin colters. The iron point was often sent three to four feet below the surface, and required a strong force to move it. This implement has been principally superseded, where first adopted, by the substitution of thorough and more permanent tile underdraining. — *Am. Agriculturist.*

WHAT IS A FAIR RENT FOR DAIRY COWS?

What is a fair average number of pounds of butter per annum to be expected from a common lot of dairy cows in this country?

A proprietor of land, in Orange county, proposes to rent me his farm next spring, with fifty cows, for which I should engage to give him a certain number of pounds of butter per head. Can you inform me what is a fair rent? I am satisfied with the terms of giving one third of the crop for rent, but fear to accept his terms for the cows.

A STRANGER IN AMERICA.

The average annual yield of pounds of butter per cow is a very uncertain matter. We doubt whether it exceeds one hundred pounds per cow in Orange county; though we believe that two firkins (one hundred and sixty pounds) are considered a fair average. We know one lot of ten cows that average three firkins each, equal to four hundred and eighty pounds per annum. We believe the most usual rent is one firkin for each cow. We saw fifty excellent cows the other day, for which the farmer gives the proprietor a rent of sixty-seven pounds each per annum. In this instance the farm is very productive for grass, and the dairy conveniences of the best kind. When this is not the case, the lessee cannot afford to pay so high a rent. — *Am. Agriculturist.*

FOUNTAINS.

Besides the great utility of a jet of water on ornamental grounds, it is one of the most refreshing and delightful things in the warm season. Fountains add greatly to the beauty of water jets. They may be had of various prices, from the simple vase, that costs but a few dollars, up to the large and magnificent, that are used in public places, that cost hundreds of dollars, according to one's taste, means, and situation. Any ingenious person may, by wood work, made in imitation of stone, or by bricks or stone, make very comely or beautiful fountains, at a very small expense.

A great many people have convenient means of having a jet of water on their ornamental grounds, at very small expense, especially in connection with water for the house and barn. What is more grateful to our feelings, on a hot summer's day, and in a dry location, than a stream or spring of water? And when it is thrown up in a jet, in an ornamental fountain, it is one of the most beautiful things that can gladden the heart of him who surveys a tasteful scene, in a garden, lawn, or other place of embellishment.

HORSE AND CATTLE MEDICINES, &c.

Dr. G. H. Dadd, Nos. 1 and 2 Haymarket Square, Boston, keeps a complete assortment of medicines for the various diseases incident to domestic animals. He is a veterinary surgeon, and he treats diseases by an improved mode, avoiding bleeding and powerful and dangerous mineral medicines, and going for the reformed practice, by the use of botanic medicines, mild means, and good management.

His medicines are prepared by him in his own laboratory, and he produces the highest testimonials in their favor from many of the most intelligent men in the country. Dr. Dadd has studied the art of healing the human race, and he has had some practice in medicine and surgery in that profession, which enables him to be more thorough in his present practice. From our acquaintance with him, and the reasonableness of his system, we consider it strongly marked by *common sense*, the most important faculty in the competent practitioner. We cheerfully recommend Dr. Dadd's medicines to the consideration of the public, and we commend him to those who would consult or employ a veterinary surgeon. He is about publishing a Compendious Dictionary of the Veterinary Art, embracing also Outlines on Anatomy and Physiology, and Directions for Feeding, Watering, and Management generally.

Literature and Economy. — If a young man has a taste for literature, and virtuous and intelligent society, his economy will be a thing of course; because his pleasures will not be expensive, and not dependent on the caprice of fashionable and extravagant associates.

Domestic Department.

For the New England Farmer.

How to live prettily in the country.* — It is possible that the leading word at the head of this chapter is not sufficiently comprehensive and emphatic to express all that is intended in what we here say of the farmer's wife in relation to good living. Admitting that to be the fact, it is not easy to decide what is living prettily, if it be not the fruition of the best fare at a very moderate expenditure. But, however excellent may be the smoking viands on the farmer's table, when duly prepared, much would be added to the zest with which they are received, if more attention were paid generally to the table furniture. It cannot be denied that a nice clean tablecloth, a supply of comely dishes, spoons, castors, knives and forks duly arranged, not only impart a relish for what is in the dishes, but make an impression that the family live prettily. Cheap as such articles are, it is surprising that they are not more abundantly provided. On the other hand, if the table furniture is in a ruinous condition — if it has been cast upon the table in wild disorder — if the whole indicate a sad estrangement from needful purifications, a relish for the repast is greatly impaired.

For such negligence there is no excuse. The excuse usually given, that none but the members of the family are present to witness it, is about as satisfactory as it would be for all the members of the family going to the table with unwashen hands because none but themselves are present to witness the indecency. It is a species of domestic economy with which we have no fellowship, that a family live like pigs when by themselves; and that all their efforts for good cookery, table furniture, and good fare, are to be produced only once in three or four months, when visitants are present to witness the display. We think families should have respect for themselves, for each other, as well as for those who occasionally partake with them. Such as make all their efforts in dress, or furniture, or in the culinary department, to please the eye or to secure the applause of strangers and doubtful friends, become miserably paid for their toils. They live for others, and not for themselves. They toil for others, and not for themselves. And this they do, not on the principle of Christian charity, but for a breath of popular favor, as empty as the wind. A very large portion of family expenditures, particularly in what is called fashionable life, is made wholly on this principle, for others to gaze upon — perhaps to ridicule; and not for the comfort or benefit of those who make them.

Allusions have been made, in other parts of this work, to the article of clothing appropriate in the country; but it may not be amiss to refer to it here, as one of the main features in living prettily. To dress neatly at all times, and yet so as to occasion no pecuniary outlay incompatible with the ordinary means in rural life, requires good taste and good management of a high grade, especially in the female head of the family. The mother who can clothe her children, as well as herself, in a style of comeliness — always in a condition to be seen by strangers without mortification, and without an expenditure to embarrass her husband — deserves of him, and of others, high commendation. This is one of the most valuable accomplishments of the housewife; and nothing in a greater degree contributes to the end made the subject of the present chapter. Where we see a family of children decently clad, clean, tidy, and of good breeding, especially in the more humble walks of life, we impromptu exclaim, They must have an excellent mother! The country district school, with its forty or fifty little boys and girls, attired in the manner described, furnishes one of the best specimens of the healthful simplicity, and the good domestic economy, in rural locations. Here the farmer's wife may gather laurels of unfading beauty and verdure; in comparison of which the jewels and the costly attire of the fashionable lady in the ball-room are contemptible and worthless. And, indeed, what are the fashionable accomplishments of the lady of rank — her music, her drawing, and her flippancy in French, to the ability of the farmer's wife to rear up sons that will be eminent statesmen and divines, and daughters that will hold the highest position in society?

While the farmer's wife is doing thus much towards living prettily, we have a few things to add for the farmer himself to do, in this good work. Who is to see that the Sunday wagon, which is to take the family to church, and now and then appears on a holiday, is free from mud and dust, and has been duly honored with a coat of varnish? The farmer himself, or his sons, if he have them of sufficient age. Who is to see that the court-yard and garden fence is in good repair, and made white with paint? Not the farmer's wife, but the farmer himself, or some one under his direction. Who is to see that the family mansion and the various out-buildings have been properly regarded; the hinges and fastenings upon the doors all sound; the paint kept bright; the windows free from broken glass; and no loosened weather-boards to become Æolian harps to the rats and mice, while the family is asleep? It need not be said, that this is the duty of the male portion of the household. Let not the male reader be displeased, if one question more be propounded on this subject. Lastly, then, whose duty is it to see that the walks about the mansion be made clean and hard, and the grounds contiguous to it be relieved from nuisances of every description? Surely, this is not the work of the farmer's wife, nor of his daughters. He should himself see that it is done. Hence, let it be said to the reader, male and female, Do respectively what is here set forth, and when the minister, or the doctor, or your relatives from the city, make you a visit, they will say to you in sincerity and truth, How prettily you do live!

JOHN L. BLAKE.

Orange, N. J., *Jan.* 30, 1850.

* From the manuscript of the Farmer's Every Day Book, by the Rev. John L. Blake, D. D., to be published early in the spring of 1850.

Youth's Department.

Thoughts for Young Persons. — In a previous communication I intimated a purpose to converse with you, briefly, upon the importance of *correct early habits.*

First, then: Such habits will appear important, when we consider their connection with *physical* advantage. Health is among our greatest blessings. Whatever, therefore, can lawfully be done to promote it, must be acknowledged our duty; and whatever impairs or destroys health, should be avoided as an evil, and regarded as an enemy.

Every sinful indulgence, every irregularity of habit, at a period when our physical natures are *so* susceptible of injury, must, in some degree, disadvantageously affect the constitution, weaken our energies, and hasten premature decay.

Young lads who smoke cigars, and chew the poisonous weed of which they are made, reap an

early harvest of nervous diseases, as well as render their persons filthy and disgusting in polite society.

Intemperance, also, despite all the efforts as yet made to abolish it, still has its votaries; and young boys, not twelve years of age, are not *too* young to become the victims of strong drink. Let the infant be fed with wine from the teaspoon — the prattling child hold the gin glass in his own little hand — let the youth drink freely the well-mixed brandy and rum, and bloat upon copious draughts of strong beer, nor change his course up to manhood, and at the age of twenty-five, you may behold in his person the infirmities of age.

Eating late at night is also injurious to health. After having taken regular meals through the day, and the hour has arrived when the head should be safely pillowed in the arms of "nature's sweet restorer," the young lad strays away (and some old lads) with his associates to the oyster saloon, and there imposes upon his already weary digestive organs the additional task of oysters, clams, nuts, pies, cakes, &c. Now, who will be at all surprised if the remainder of the night is spent in restlessness and frightful dreams? The number is few, indeed, that can retire upon a full meal and sleep without interruption. Quiet rest is essential to the development of the physical powers; and to deny that these and similar practices do waste the bodily energies, is to contradict philosophy and experience. Admitting then that such habits do us harm, it is not unreasonable to infer that great advantage must accrue to him, who, while in his youth, gives strict attention to rules of temperance, and whose hours for labor, recreation, and repose, are carefully prescribed. He who has no *system* of living, is like a noble ship at sea without chart or compass, driven before the ever-varying winds of appetite and passion. If he do not split upon some rock of error, or go in pieces upon some rugged shore of disease and pain, or float dismasted, unmanageable, and useless, upon the bosom of life's great deep, he will at least make a hazardous voyage, and reach the haven of longevity, as the soldier escapes unscathed from the field of bloody conflict, where ninety-nine of a hundred have fallen. Let us then, my young friends, estimate the true value of health, and carefully endeavor to promote it by every suitable means. In a word, let our every act be but a part of a *complete system of habits and duties*, and it can scarcely be possible that we fail to enjoy health, and secure its attendant blessings, down to a good old age. More anon. M. H. A.

HALLOWELL, *Feb.* 4
— *Maine Cultivator.*

Health Department.

REMEDY FOR ASTHMA. — An individual who has suffered much from asthma, and who has in vain sought relief from regular physicians, wishes us to give publicity to the following remedy:—

"Procure common blotting paper, and thoroughly saturate it in a solution of nitre, (saltpetre,) and let it be carefully dried by the fire, or by exposure to the rays of the sun. On retiring at night, ignite it, and deposit it, burning, on a plate or square of sheet zinc or iron in your bedroom."

In many cases, it is said, this has enabled persons painfully afflicted to enjoy their rest. — *Maine Cultivator.*

Hundreds of nights within the last five years, when the bitter pain widened the time in proportion as respiration became more difficult — hundreds of nights has the difficulty been lessened by a suspension of what seemed an almost interminable agony in the smoke of burning nitre. As a means of averting present suffering, the subscriber can recommend, from his own experience, the use of saltpetre almost identically prepared as above. Many times has he lain down in a smoke condensed seemingly to the smothering of a common healthy breather, and found relief from the worst suffering. — *Hon. Isaac Hill.*

HOW TO PRESERVE HEALTH. — Medicine will never remedy bad habits. It is utterly futile to think of living in gluttony, intemperance, and every excess, and keeping the body in health by medicine. Indulgence of the appetite, indiscriminate dosing and drugging, have ruined the health and destroyed the lives of more persons than famine or pestilence. If you will take advice, you will become regular in your habits, eat and drink only wholesome things, sleep on a mattress, and retire and rise very regularly. Make a free use of water to purify the skin, and when sick take counsel of the best physician you know, and follow nature.

Mechanics' Department, Arts, &c.

DIFFERENCE BETWEEN IRON AND STEEL. — Steel is iron passed through a process which is called cementation, the object of which is to impregnate it with carbon. Carbon exists more abundantly in charcoal than in any other fusible substance, and the smoke that goes up from a charcoal forge is carbon in a fluid state. Now, if you can manage to confine that smoke, and put a piece of iron into it for several days, and heat the iron at the same time, it will become steel. Heating the iron opens its pores, so that the smoke, or carbon, can enter into it.

The furnace for this purpose is a conical building of brick, in the middle of which are two troughs of brick or stone, which hold about four tons of bar iron. At the bottom is a large grate for the fire. A layer of charcoal dust is put upon the bottom of the troughs, then a layer of bar iron; and so on alternately, until the troughs are full. They are then covered over with clay, to keep out the air, which, if admitted, would prevent the cementation. Fire is then communicated to the wood and coal with which the furnace is filled, and continued until the conversion of the iron into steel is completed, which generally happens in about eight or ten days. This is known by the blisters on the bars, which the workmen occasionally draw out in order to determine. When the conversion is completed, the fire is then left to go out, and the bars remain in the furnace about eight days more, to cool.

The bars of steel are then taken out, and either sold as blistered steel, or drawn to a convenient size, when it is called *tilted* steel. German steel is made out of this blistered steel, by breaking the bars into short pieces, and welding them together, drawing them down to a proper size for use.

SUBSTITUTE PAINT VARNISH. — Recipe for a composition to economize paint.

To one pound of gum shellac add four ounces of borax and two quarts of water. Boil till dissolved. These proportions may be varied according to the quality of the materials used. After the paint is prepared for use, add nearly an equal quantity of the above, and stir until it unites. The paint will then be thicker than before, and must be reduced with oil or spirits of turpentine. The paint will now cover twice the surface as at first.

CHEMISTRY AND VEGETABLE FOOD.

It is the object of chemical research not merely to explain known facts, but to remove misapprehensions and correct erroneous opinions. The recent determinations of the proportion of nitrogen contained in wheat have served both these purposes. Thus it was long asserted and believed, that the wheat of warm climates always contained more nitrogen, and was consequently more nutritive and of higher money value, than the wheat of our temperate countries. But later researches have corrected this hasty deduction; and have placed our home wheat in its proper position, economical and nutritive, as compared with the wheat of India, of Southern Australia, or of the Black Sea. Again, the British miller usually requires a portion of foreign wheat to mingle with our native grain, both to make it grind more easily, and to satisfy the baker with a flour that will stand much water. The pastry cook and the macaroni maker also demand of him a flour which will make a peculiarly adhesive dough. These several qualities were supposed to be inherent only in wheat which abounded, in an unusual degree, in gluten, and which was produced under specially favorable conditions of soil and climate. Modern chemistry has the merit of gradually removing these misapprehensions, and of directing us to the true causes of all such differences. So in regard to the superior amount of muscle-forming matter supposed to exist in wheat in comparison with other kinds of native grain, such as the oat. Experience had long taught the Scotch that oats, such as they grow in their climate, are a most nutritious food; but the habits of the more influential English, and the ridicule of a prejudiced lexicographer, were beginning to make them ashamed of their national diet. Chemistry has here stepped in, and by her analysis of both, has proved not only that the oat is richer in muscle-forming matter than the grain of wheat, but that the oatmeal is, in all respects, a better form of nourishment than the finest wheat flour. But, what is more, chemistry has brought us acquainted with the value of parts of the grain formerly considered almost as waste. The husk or bran of wheat, for example, though given at times to pigs, to millers' horses, and other cattle, was usually thought to possess but little nutritive virtue in itself. Analysis, however, has shown it to be actually richer in muscular matter than the white interior of the grain. Thus the cause of its answering so well as food for cattle is explained; and it is shown that its use in bread (whole meal bread) must be no less nutritive than economical. The true value of other kinds of food is also established by these inquiries. Cabbage is a crop which, up to the present time, has not been a general favorite in this country, either in the stall, or for the table, except during early spring and summer. In North Germany and Scandinavia, however, it appears to have been long esteemed; and various modes for storing it for winter use have been very generally practised. But the cabbage is one of the plants which has been chemically examined, in consequence of the failure of the potato, with the view of introducing it into general use; and the result of the examination is both interesting and unexpected. When dried so as to bring it into a state in which it can be compared with our other kinds of food, (wheat, oats, beans, &c.,) it is found to be richer in muscular matter than any other crop we grow. Wheat contains only about twelve per cent., and beans twenty-five per cent.; but dried cabbage contains from thirty to forty per cent. of the (so called) protein compounds. According to our present views, therefore, it is preeminently nourishing. Hence, if it can but be made generally agreeable to the palate, and easy of digestion, it is likely to prove the best and easiest cultivated substitute for the potato. And no doubt the Irish kolcannon (cabbage and potatoes beat together) derives part of its reputation from the great muscle-sustaining power of the cabbage — a property in which the potato is most deficient. Further, it is of interest —of national importance, we may say — that an acre of ordinary land will, according to the above result, produce a greater weight of this special kind of nourishment in the form of cabbage than in the form of any other crop. Thus twenty tons of cabbage, and good land, will produce, in good hands, forty tons of drum-head cabbage on an imperial acre — contain fifteen hundred pounds of muscular matter; while twenty-five bushels of beans contain only four hundred pounds; as many of wheat only two hundred, twelve tons of potatoes only five hundred and fifty, and even thirty tons of turnips only a thousand pounds. The preference which some farmers have long given to this crop, as food for their stock and their milk cows, is accounted for by these facts; while, of course, they powerfully recommend its more general cultivation as food for man. We may add, while speaking of cabbage, that it is known to be so exhausting to many soils, that wheat will scarcely grow after an abundant crop of it. It springs up, indeed, but yields little straw, and early runs to a puny ear containing little grain. But the same analysis, which shows the value of the cabbage crop, shows also what it takes from the soil; and explains therefore the kind of exhaustion produced by it, by what special applications this exhaustion is to be repaired, and how repaired at the least cost. Again: In many parts of our island furze or gorse grows up an unheeded weed, and luxuriates in favorable spots, without being applied to any useful purpose. In other districts, however, it is already an object of valuable though easy culture, and large breadths of it are grown for the feeding of stock, and yield profitable returns. Chemical researches show its nutritive property to be very great. Of muscle-building materials, it contains, when dry, as much as thirty per cent., and is therefore, in this respect, superior to beans, and inferior only to the cabbage. Under these circumstances, we can no longer doubt the conclusions at which some experimental feeders had previously arrived, nor the advantage which might be obtained from the more extensive cultivation of gorse on many poor and hitherto almost neglected soils. The history of the tussac grass is familiar to most persons. A native of the Falkland Islands, where it grows in the large tufts or tussacs from which it derives its name, it is described as fattening in an extraordinary manner the stock, and especially the horses, which graze upon it. Some of the seeds which have been lately imported into this country having vegetated, the grown-up plants have been analyzed; and it was found, "that the proportion of muscle-forming ingredients in the dried grass is as great as in the best samples of wheat, oats, or barley; and therefore the grass is of a very nutritious character." Thus its alleged feeding qualities are confirmed; and we may look forward to seeing it, on further trial, domesticated in Great Britain. The money value of the above investigations is obvious enough, and we do not dwell upon them. But the same branch of chemical inquiry deals with questions of a larger and higher kind. — *Edinburgh Review.*

Labor.

The world is but one great family. What then is this narrow selfishness in us, but relationship forgot?

The making of turpentine has commenced on some of the pine forests of Florida, and has proved very profitable.

POTATOES.

Mr. Editor; I appear once more before the readers of the *Germantown Telegraph*, on a topic which all will acknowledge to be one of importance to the farmer — that of potato raising. I will give you our mode of culture, down here, where the potato may be regarded as a staple product, and where its cultivation is as well understood as perhaps any where else on the globe.

Potatoes planted early generally succeed better and produce more liberally than when planted late. There are various methods of cultivating this root practised, but I am aware of none that is preferable to the following: —

Break up sward land in the spring, roll, harrow thoroughly, and spread on your manure in liberal quantity, harrow again, and having furrowed, place some good compost in the drills, drop your seed, and cover. The compost should be fine, consisting of rotten leaves, chip manure or muck — say one load; house ashes, ten bushels; salt, four bushels; lime, five bushels; gypsum, one and a half bushel; nitre, twenty lbs.; the whole to be thoroughly incorporated and reduced, by repeated turnings, to a perfectly homogeneous mass. One shovel full of this in every hill will be sufficient. The potatoes may be covered with an instrument made by fastening two pieces of plank, six inches wide, and three feet long, together, in the form of an A, and drawing it lengthways of the rows by means of traces secured to the wide end. A cross-piece is secured to the upper part, into which handles are inserted for its guidance, similar to those attached to the hoe-harrow and cultivator. This instrument, which may be constructed in a few hours by any field hand who possesses sufficient ingenuity and artistic skill to "whittle a Yankee shingle," works admirably, and is one of the most perfectly operating labor-saving implements to be found on the farm. If necessary, the bottom of the sides may be scarfed away, say from one half the distance from the fore part to the hind part, reducing the sides by a gradual taper to one half or one third their width at the hind end. This will leave the rows over which it passes elevated somewhat in the middle, or just over the seeds — an arrangement sometimes necessary, especially where the furrow plough has excavated but a shallow trench, or where the soil is too close or compact, from recent rains or other causes, to admit of the coverer gathering sufficient earth competently to inhume the seed. By "shoeing" the coverer, which is effected by attaching two strips of iron to the lower edges of the triangle, and allowing them to project some two inches or so from the edges, inward, with a slight inclination downward, the entire surface between the rows will be "scraped," and the soil thoroughly loosened and refined. As soon as the plants make their appearance, a liberal dressing of lime and plaster, or house ashes and plaster, should be applied broadcast, and the cultivator introduced to arrest the development of weeds. No ploughing or harrowing should be allowed where the cultivator can perform its sufficient work; nor should there be any — not even the slightest — elevation permitted about the plant. Some, perhaps, will question the philosophy of this theory, as it is a practice to which they have always been accustomed; but this is neither here nor there in establishing the truth or falsity of the usage. Where a high conical hill is made around any vegetable, it can only serve as a drain or ditch, by which water is conveyed *from* the vegetable and into placers — the interstices between the rows, where it is not immediately wanted, and of course can effect only a remote advantage; but a flat surface allows the rain to penetrate the soil immediately about the roots, and to exert its invigorating influences at once and with power upon the plants. Besides, in a dry time, the gathering of soil into hills, by exposing a greatly increased surface, augments the effects of drought. This no one can doubt who reasons upon the subject candidly.

In cultivating the potato, many adopt a very loose and reprehensible method; they seem to think that it is a hardy vegetable, and will therefore "fight its way through," even though left alone and unassisted; but this is an error, for although the potato will sprout, push upward to the inviting air, and form tubers, even when unaided, yet its productiveness and value, as a field crop, must ever intimately depend upon the care and cultivation it receives. No production better repays extra attention, none is more essentially injured by neglect. Weeds should never be permitted to overtop the vines, or indeed to corrupt the soil devoted to this root. They are no less injurious in the potato field, than in the garden, or among the corn crop; and where they cannot be thoroughly extirpated by one or two hoeings, the operation should be repeated till they are completely eradicated, and the soil emancipated and cleansed.

A NEW ENGLANDER.

Near Claremont, N. H., *Jan.* 26, 1850.

— *Germantown Telegraph.*

CAUSE AND EFFECT.

In writing for the public, farmers should be careful to give nothing but the result of exact experiment on doubtful subjects. Too many, in their anxiety to discover the cause of diseases in grain, such as *smut* in wheat, or the *rot* in potatoes, judge from a single imperfect experiment; whereas, such subjects require the most careful examination.

Thus, a late writer in the "Newspaper" supposes he has discovered the cause of smut in wheat, from the single fact, that after sowing oats that had been harvested before fully ripe, and his crop was much injured with black, or smut oats, that of course the same must be true in regard to smut in wheat, and closes by asking, "*If this is not the true cause, what is?*" Now, he should remember that it is often much easier to ask questions than to answer them. Now, it is all right to call attention to such facts; but before coming to any conclusion, it would be better to make a few more experiments, and then find whether smut in wheat and smut in oats is the same disease, and arises from the same or similar causes. My own experience is rather opposed to his theory, having last season harvested both my oats and wheat rather greener than usual, and finding this season both remarkably clear of smut. Any thing calculated to throw light on such subjects should be carefully noted, and repeated experiments made before coming to a conclusion, as "appearances are often *very* deceptive."

Another subject to which I would like to call attention is, that in giving the result of experiments with lime, manure, &c., more care should be taken to state what kind of soil it has been applied on, as there is so great a variety of soil and such a vast difference in the component parts of many, that farmers are often led into error in this way. For instance, some one applies lime to a soil in which it is naturally deficient, and of course with good effect — the result is known; and others again spend time and capital in applying it to a soil in which nature has deposited a great sufficiency, and the astonished farmer is able to see no effect whatever.

Such has been the result in our neighborhood, where the soil is strongly impregnated with lime; although applied in different ways, not the slightest effect has been produced on the crops since raised on the land to which it has been applied. J. P.

— *Dollar Newspaper.*

VALUE OF CORNSTALKS AS FODDER.

The question is often asked, if cornstalks are of much value as fodder. We answer, without fear of contradiction, that if well saved and properly used, they are fully equal to the same weight of hay.

Last year we fed three yoke of oxen on cornstalks, with the addition of no more feed than we should have used with the best English hay. Our mode of preparing them was as follows:—

The stalks were cut with the ordinary cylindrical machine, in pieces of half an inch in length, and placed in a hogshead. Three gallons of boiling water, containing one gill of salt, was thrown upon them, and the top of the cask covered with a blanket. The steam arising from the hot water swelled and softened the cornstalks to their original size; and when cold, a little ground feed was thrown upon them, and thus fed to the cattle.

The oxen worked hard all winter, each yoke bringing three loads per day, of more than a ton each, from a distance of three miles, and in the spring they were as well conditioned as in the fall.

When corn is raised to be pulled while green for boiling, the stalks will contain much more saccharine matter than when suffered to ripen. The stalks should be permitted to grow after the corn has been pulled.

Cornstalks may be grown for fodder, with much greater strength than hay, and entirely capable of supplying food for animals, without the addition of grain of any kind; and for milch cows, it would be equal if not superior to any other food. We refer to the method adopted by Mr. Webb, of Delaware, for the purpose of making sugar.

As soon as the ears appear, pinch them off, and repeat this treatment twice; the consequence will be, that the juice of stalks thus treated will contain as much saccharine matter as that of the sugar-cane; indeed, we know of one experiment being made, which gave the juice of eleven degrees Beaume, while the juice of the sugar-cane as grown in Louisiana is but nine degrees Beaume. This mode of growth, however, will only answer in such districts as, from want of market, find it unprofitable to raise corn for the ears. When this mode is adopted, the planting should be early, for the stalks will necessarily require a hot sun to cure them. If cut too late, the sugar contained in the juice will be acid before they are dry. — *Working Farmer.*

THE PROPER MODE OF FEEDING CATTLE.

An English writer observes that two great points in feeding cattle, are regularity and a particular care of the weaker individuals. On this last account, there ought to be plenty of rack room, that too many may not feed together; in which very common case the weaker are not only trampled down by the stronger, but they are worried, and become cowed and spiritless; than which there cannot be a more unfavorable state for thrift; besides, they are ever compelled to shift with the worst of the fodder. This domineering spirit is so remarkably prevalent among horned cattle, that the writer has a hundred times observed the master beasts running from crib to crib, and absolutely neglecting their own provender for the sake of driving the inferior from theirs. This is, much oftener than is suspected, the chief reason of this difference in a lot of beasts after a winter's keep. It is likewise, he says, a very common and very shameful sight, in a dairy of cows, to see several of them gored and wounded in a dozen places, merely from the inattention of the owner and the neglect of coupling the horns of those that butt. The weaker animals should be kept apart; and in crib feeding it is in some cases a good method to tie up the master beasts at their meals. Dr. Dean says there should be more yards than one to the barn where divers sorts of cattle are kept. The sheep should have a yard by themselves, at least; and the young stock another, that they may be wholly confined to such fodder as the farmers can afford them.

THE MILKMAID'S EAR GUARD.

Every one who has had "*gumption*" enough to milk a cow, has experienced the miseries of a rap, now and then, over the ears, and sometimes in the face and eyes, by that effectual fly-brusher — the cow's tail. This is most troublesome in fly-time; but sometimes a cow, either being naturally ticklish, or uneasy from some other cause, will use her *lash* in midwinter, when that *appendage* is not in a condition to give you a very favorable idea of its savory or odoriferous condition. We have often thought that some simple mode of obviating this evil would be of great service to milkers; but we could never hit upon any thing that suited us, and so we have always, when milking, borne the infliction like a martyr. Being at Col. Swett's, in Hartford, Oxford Co., not long ago, we saw his son, while milking, use one of the most simple, and at the same time effectual contrivances for protecting your ears, in such cases, that you can imagine. On inquiring into the origin of it, we were informed that it was believed to be first used (in that vicinity at least) by the late John Allen, of Peru. It is made in the following manner:—

Take a rope of good size, say that which is called inch rope, and cut a piece off about six feet long. Tie the ends together, and make a loop or hoop. Spread this open, and throw it over the cow's back in such way that the upper part of it will lie across the loins and forward of the hip-bones, and the hinder part fall over and enclose the rump of the cow, and hang down about half way from the root of the tail to the hocks and gambrel joints.

This is all, and poor mully will find, on whisking her tail, that there is a limit to its circuit; and, although it is neither tied nor chained, nor slavery *entailed*, the "area of its freedom" is nevertheless essentially *curtailed*, and the milkmaid's ears no longer assailed. — *Maine Farmer.*

TREE PLANTING.

Among fruit trees, the apple, the quince, and the peach emit roots much more freely than the pear, plum, and cherry — and in light, sandy, friable soils, form much more easily than in stiff, moist, adhesive soils. These are familiar facts to all cultivators, and they serve as a guide in planting.

But under all circumstances it is unsafe to plant a tree without reducing its branches in such a manner as to compensate for the loss of root, and general derangement inseparable from removal. Let us take, for instance, an apple-tree, six feet high, with a fine head and numerous side branches. This tree was growing vigorously in the nursery, with its roots spread out and well at home in the soil; but the tree is dug and pulled up, part of its large roots are cut off, many of the smaller ones are dragged off, and before it is planted a great many more are dried or rotted and killed off. Thus the tree is left minus a great portion of its feeding roots, on which the top must depend for support. Its nice balance, which nature and art gave it in the nursery rows, is

destroyed, and without some compensation it cannot live — at least it cannot grow for a long time to come. The opening buds seek for nourishment, but after the little stock laid up previously is exhausted, they can find none, and perish they must.

If a tree has attained a considerable size, and has a branching head, these branches should be cut back according to circumstances. A tree with large and healthy roots, and abundance of fibres, will sustain a much greater amount of head than a tree with short, poor, or badly mutilated roots, and few fibres. Apples, quinces, or peaches will bear more head than pears or plums, and so on. Trees taken fresh from the soil and replanted do not require the same degree of cutting as those that have been transported to a great distance. Trees that are planted in a light, mellow, warm, soil, favorable to the formation of roots, will require less cutting than those planted in a colder, stiffer soil, where roots will be emitted slowly. Trees taken up with the earth around the roots, and evergreens are the only exceptions. These are a few of the circumstances to be well considered by every one who plants a tree.

Pruning and cutting back, must not only be done, but done well. It is next to manslaughter to cut and slash the branches of a tree with an old rusty saw-edged jackknife. It is nothing else than tree-slaughter. A pruning knife should be as sharp and smooth on the edge as a razor. When a branch is to be wholly removed, it should be done smoothly, close to the trunk or limb on which it grows. If a limb is merely to be shortened, it should be cut close to a good plump and healthy looking bud, that promises to make a vigorous shoot. If the future shoot is desired to grow erect, the bud should of course be on the upper side of the branch cut; and if desired to take a spreading or horizontal direction, the bud should be on the under side. The object in cutting close to the bud (not so close as to injure it, is to avoid the piece of dead wood that must remain, if cut between two buds. Then the balance of the tree must be thought of. If the branches are left longer on one side than on the other, the tree will inevitably grow one-sided; the shoots on one side will be more vigorous than on the other, and this will be another disaster. This is as plain as we can at present make the matter in a few words. To sum it up, in short, we would say: —

First. Place the roots of your trees in a soil favorable to the formation of roots.

Second. Reduce the heads in such a manner as to correspond with the character of the tree, the condition it is in, and the season and situation in which it is planted.

Third. In every operation exercise reason and care, for it is astonishing what even the unpractised hand will do, if he will but think. — *Genesee Farmer.*

HOMESTEAD EXEMPTION.

The following arguments in favor of exempting a man's homestead from liability, we find in one of our western exchanges: —

"There are two leading reasons which ought to have great weight. The first is, that the direct tendency of exempting the homestead from debt, is to preserve the integrity of the family, both in society and property. It will keep the family together by keeping them at home — safe from all the storms of adversity. Now, the state which legislates has a deep interest in maintaining the unity and prosperity of the family. The whole is made up of its parts. Society is founded in the family. If no family is driven out to seek a precarious support — the state will have no paupers to maintain. In every state of society, no matter what the laws, the solvent must maintain the insolvent. In both the natural and Christian state of society it is the duty of the members of a family to do this to one another. If, then, the family can be kept united, and have a home to rely upon, it is almost certain they will be able to do it.

"There is another reason almost equally strong, and which concerns the political health. There is no independence, strictly speaking, to be relied upon among people who have neither a homestead nor the means of getting one. Many of our laborers do get homesteads, saved from the profits of their labor. This should be encouraged — the whole community should be made independent, if possible."

WONDERS OF GEOLOGY.

More than nine thousand different kinds of animals have been changed into stone. The races or genera of more than half of these are now extinct, not being at present known in a living state upon the earth. From the remains of some of these animals, they must have been larger than any living animals now known upon the earth. The Megtherium, (large beast,) says Buckland, from a skeleton nearly completed in the museum in Madrid, was perfectly colossal. With a head and neck like a Sloth, its legs and feet exhibit the Armadillo and Ant-eater. Its fore feet were a yard in length, and more than twelve inches wide, terminating by gigantic claws. Its thigh bone was nearly three times as thick as that of the elephant; and its tail, nearest the body, was six feet in circumference. Its tusks were admirably adapted to cutting vegetable substances, and its structure and strength were intended to fit it for digging in the ground for roots, on which it principally fed.

FIELD AND GARDEN ROLLERS.

These implements are coming to be considered almost indispensably necessary, in an improved state of cultivation. They are most successfully used on lands that are free from stones and stumps, to smooth the uneven surface; and not only so, but their utility is also important in breaking the lumps of baked earth which obtain in clayey soils; also in smoothing and levelling grounds that have been newly sown with grain, or that are to be laid down with grass, tending to the production of greater crops of grass at a cost of much less than would otherwise be necessary.

The use of the roller on dry grounds sown with grain, causes the mould to enclose the seed, while it prevents the moisture from evaporating sooner than it otherwise would. The rolling of land in tillage, should be done when the ground is sufficiently dry to prevent it from adhering to the roller; but where grass lands are to be subjected to the process, it should be early in the spring, and when the earth is soft and wet.

Rollers may be of various sizes, according to the team by which they are drawn, as the weight must be increased in proportion to the size, consequently requiring a proportionate power to move them. The most suitable size for one horse, or for one yoke of oxen, is from twenty to thirty inches in diameter; and the most perfect roller we know of, is made of a series of cast iron rings, or rather wheels running on a large wrought iron shaft, which can be made of any required length or size, from a single section or ring, to use by hand on gravel walks, up to the various dimensions required for field work which are constructed with a frame or carriage, so as to form a box, or trough, running the whole length of, and both before and behind the roller, and intended to carry any additional weight, such as stones, &c., when it may be required. — *Worcester Transcript.*

NOTICES OF PUBLICATIONS.

Annual of Scientific Discovery, a Year Book of Facts in Science and Art, exhibiting the most important Discoveries and Improvements in Mechanics, Useful Arts, Natural Philosophy, Chemistry, Astronomy, Meteorology, Zoölogy, Botany, Mineralogy, Geology, Geography, and Antiquities, with other useful matter; by David A. Wells, of the Lawrence Scientific School, Cambridge, and George Bliss, Jr. — In preparing this work, the authors have had excellent advantages, by access to all the scientific works of this country, and of the principal countries in Europe, and by the counsel and contributions of some of the ablest scientific men in the country. They have performed their task in an able and faithful manner, and we recommend the work as one of great interest and utility. Published by Messrs. Gould, Kendall, & Lincoln, 59 Washington St. 400 pages, 12mo. The mechanical part of the work is neatly executed.

Hayward's Vermont Gazetteer. — This work is not only useful and interesting to the people of Vermont, but to every man of business, and to every family, particularly in New England. The convenient arrangement of a gazetteer renders the valuable information it contains readily accessible, and a work of this kind is as indispensable to a man of business or of general information, as is a dictionary to a man of letters.

The Common School Writing Book, by O. G. Badlam. New York, Collins & Brother; Boston, Reynolds & Co., 27 Cornhill. — This is the first work that we have examined that defines the breadth of letters, and the spaces between them, by fine oblique lines, leading the scholar to a uniformity of letters and spaces, until he forms the habit, and then these guides are omitted. It appears to us that this novel system possesses peculiar advantages, and we would commend it to the particular consideration of writing masters and teachers generally.

The American Phrenological Journal and Miscellany, by O. S. and L. N. Fowler. New York, Fowlers & Wells, publishers. — This work is monthly, about the size and form of the N. E. Farmer, at $1 00 a year. It makes a very neat volume. Besides the peculiar science to which it is particularly devoted, it is highly interesting to every intelligent man, as a work of philosophy, education, &c., treating of the qualities of the mind, its powers, liabilities to injury, and the importance of correct mental training.

The Water-Cure Journal, and Herald of Reforms, in the same form, at the same price, and by the same publishers, is among the most valuable periodicals of the day. It commends a system that is too much neglected. There is no remedy for disease so sovereign — there is no other thing, simple or compounded, that comes so near being a panacea as water. It may be used in a thousand ways, and by its variety of temperature from solid ice to the boiling state, it may be adapted to almost every disease, and to patients of every degree of strength, from the most robust to the most feeble invalid. Thousands, yea, millions of patients are paying for medical aid and remedies, and lingering long with disease, which water, that every where abounds, properly applied, would wash away. We are particular on this subject, as the people of this country are afflicted with hydrophobia — a dread of water.

AGRICULTURAL SONG.

BY JOHN PALMER.

Plough deep to find the gold, my boys!
Plough deep to find the gold!
The earth hath treasure in her breast
Unmeasured and untold.

Clothe the mountain tops with trees,
The sides with waving grain!
Why bring over stormy seas
What here we may obtain?

O, Britain need not bring her bread
From countries new or old,
Would she but give the ploughshare speed,
And depth to find the gold!

Earth is grateful to her sons
For all their care and toil;
Nothing yields such large returns
As drained and deepened soil.

Science, lend thy kindly aid,
Her riches to unfold;
Moved by plough or moved by spade,
Stir deep to find the gold!

Dig deep to find the gold, my boys!
Dig deep to find the gold!
The earth has treasures in her breast
Unmeasured and untold.

Thomas Fuller, the historian, so well known for his quaint sayings and bright points, was one day riding with a gentleman named Sparrowhawk. The name roused his fancy, and he asked him what was the difference between "a Sparrowhawk and an owl." "Why, sir," replied his companion, "the owl is *fuller* in the head, *fuller* in the body, and *fuller all over*."

Age and Perseverance. — It is a fault too much practised by both sexes to indulge in listlessness, and a kind of hopeless languor, at the decline of life. Our energies and talents were given us to persevere to the end.

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

☞ The Postage ☜

On this paper is only 1 cent, or 26 cents a year, within the state, or within 100 miles out of the state; and 1½ cents, or 39 cents a year, beyond those distances.

STEREOTYPED AT THE
BOSTON STEREOTYPE FOUNDRY.